

Due to improvements in the ability to decrease the thickness of the ceramic layers 21a, it has become possible to both reduce the thickness of the ceramic layers 21a and increase the total number of internal electrodes 21a while at the same time decreasing the overall size of the capacitor 23 (or other laminated ceramic electronic part). Laminated ceramic parts having over 100 laminated ceramic layers, each as thin as 5 μm , have become commercially available.

While the reduction in the size of the laminated layers has improved the characteristics of the final product (reduced size and capacitance), it has created manufacturing problems. As a result of the thinning of the ceramic layers, there is little difference between the thickness of the ceramic layers and the thickness of the internal electrodes and the ratio of the combined thickness of the internal electrodes to the total thickness of the electronic part can exceed 3.0. Because the internal electrodes have become a larger percentage of the overall electronic part, they have a much greater effect on the sintering characteristics of the product.

This has the disadvantageous effect of increasing the incidence of delamination and cracking during the sintering process, thus increasing the occurrence of defective parts and degrading the reliability of the parts. Additionally, the laminated ceramic electronic part is likely to form cracks when it receives thermal shocks.--

change "both" to --opposite--; and
before "capacitor" insert --e.g.,
a--;

line 9, delete "element";
after "3" insert ---.---;
delete "having a structure in
which";
change "the" to --The--;

line 11, after "within" insert --a--;
after "ceramic" insert --body--;
after "and" insert --a--;
delete "one";
change "ends" to --end--;

line 12, change "the" (first occurrence) to
--each--;
change "electrodes" to
--electrode--;
after "2" insert --is coupled to
external electrode 4a or 4b.--;
delete "are led to the opposite
side";

line 13, delete "alternately.";

line 14, delete entire line;

line 15, delete "ceramic capacitor, three
kinds of" and insert

--Several sample capacitors
were formed and their
characteristics tested to determine
the effect of the present
invention. A summary of the
results of these tests are set
forth in Table 1 below.

As shown in the first column
of Table 1,--;

change "whose" to --having a--;

line 16, change "turn out to be" to --after
sintering of either--;

B3

change "and" to --or--;
line 17, delete entire line and insert
--were used. For example, green
sheets having a thickness of 9.8 μm
were used for the first sample 1.
After the green sheets were
formed,--;

B4

line 18, change "has" to --was--;
line 19, delete "been";
after "sheets" insert --. The
thickness of each internal
electrode for the respective sample
is indicated--;

delete "such that";
line 20, delete "they turn out to have
thickness as shown";
delete lines 21 and 22;
line 23, delete "they have been" and insert
--200 laminations were compressed
together and--;
line 26, change "Next, after" to --After
heat--;
delete "lamine by heat" and
insert --ceramic element under
predetermined conditions--;
line 27, delete "to";
after "sinter" insert --it--;
delete "under predetermined
conditions";
line 28, change "electrode has been" to
--electrodes was--;
line 29, change "on the both" to --to
opposite--;
change "Then," to --Finally,--;
line 30, delete "they have been" and insert
--the ceramic element with the

B5

BS
enc

conductive paste applied to its
ends was--;

line 31, change "has been" to --was
produced.--;

line 32, delete "obtained.";

line 33, change "Then," to --The--;
after "each" insert --of the
sample--.

Page 6, line 1, change "capacitor thus obtained,
such as a" to --capacitors were
tested to determine the--;
line 2, delete "to be obtained, a" and
insert --, the--;
line 3, change "an" to --the--;
after "delamination" insert ---,---;
change "and an" to --the--;
change "crack" to --cracking--;
line 4, delete "as well as an" and insert
--during sintering and the--;
line 5, change "crack" to --cracking--;
line 6, delete "have been studied" and
insert --to the sample--;
line 7, change "result" to --results of
these tests--.

Page 7, line 2, change "Light" to --Layer--;
line 18, change "Crack" to --Cracking--;
line 21, change "Crack" to --Cracking--.

Page 8, line 2, delete "are those out of" and
insert --fall outside--;
line 3, delete "are those";
line 4, before "within" insert --fall--;
line 5, change "Further, "Rate" to
--The "Ratio--;
line 6, change "rate" to --ratio--;

before "thickness" insert
 --individual--;
 change "the" (third occurrence) to
 --each--;
 line 7, before "thickness" insert
 --individual--, and change "the" to
 --each--;
 line 8, change "and Rate" to --and the
 "Ratio--;
 line 9, change "rate" to --ratio--;
 before "volume" insert --total--;
 line 10, before "volume" insert --total--;
 change "layer" to --element--;
 line 11, before "total" insert --i.e.,
 the--;
 after "ceramic" insert --layers--;
 line 12, delete "evaluating items and a";
 line 13, delete "evaluated" and "has had the
 following";
 after "(n)" insert --evaluated to
 determine the various
 characteristics shown were as
 follows:--;

line 14, delete "relationship:"
 line 15, delete "Resistance" and insert
 --Resistance : n = 100--;
 line 16, delete "n = 100";
 line 17, delete "Crack" and insert
 --Cracking : n = 500--;
 line 18, delete "n = 500";
 line 19, change "Crack" to --Cracking--;
 delete "Shock" and insert
 --Shock : n = 500"
 line 20, delete "n = 500";
 line 23, change "rate" to --ratio--;
 line 26, change "rate" to --ratio--;